

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**IN THE MATTER OF:**

**Prairie State Generating Company  
3872 County Hwy 12  
Marissa, Illinois 62257-3434**

**ATTENTION:**

**James Andrew  
Director, Environmental Services  
[jandrew@psgc-llc.com](mailto:jandrew@psgc-llc.com)**

**Request to Provide Information Pursuant to the Clean Air Act**

The U.S. Environmental Protection Agency is requiring Prairie State Generating Station (Prairie State or you) to submit certain information about your facility on Marigold Road in Marissa, Illinois. Appendix A provides the instructions needed to answer this information request, including instructions for electronic submissions. Appendices B and C specify the information that you must submit. You must send this information to us within 30 calendar days after you receive this request (unless otherwise stated in this request).

We are issuing this information request under Section 114(a) of the Clean Air Act (the CAA), 42 U.S.C. § 7414(a). Section 114(a) authorizes the Administrator of EPA to require the submission of information. The Administrator has delegated this authority to the Director of the Enforcement and Compliance Assurance Division, Region 5.

Prairie State owns and operates an emission source at the Marissa, Illinois facility. We are requesting this information to determine whether your emission source is complying with the CAA, the Illinois State Implementation Plan and associated air permits and regulations.

At this time, EPA Region 5 is not accepting any hard-copy document deliveries. If possible, we ask you to upload all required information to the secured web-link shared with you

at the time you received this request. If you did not receive a web-link, or if you are having technical difficulties, you must contact Brianna Fenzl at [fenzl.brianna@epa.gov](mailto:fenzl.brianna@epa.gov) or (312) 886-1960 to make arrangements to submit your response.

Prairie State must submit all required information under an authorized signature with the following certification:

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to Section 113(c)(2) of the Clean Air Act and 18 U.S.C. §§ 1001 and 1519.

You may assert a claim of business confidentiality under 40 C.F.R. Part 2, Subpart B for any part of the information you submit to us. Information subject to a business confidentiality claim is available to the public only to the extent, and by means of the procedures, set forth at 40 C.F.R. Part 2, Subpart B. If you do not assert a business confidentiality claim when you submit the information, EPA may make this information available to the public without further notice.

This information request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 *et seq.*, because it seeks collection of information from specific individuals or entities as part of an administrative action or investigation.

We may use any information submitted in response to this request in an administrative, civil or criminal action.

Failure to comply fully with this information request may subject Prairie State to an enforcement action under Section 113 of the CAA, 42 U.S.C. § 7413.

You should direct any questions about this information request to Brianna Fenzl at (312) 886-1960.

for

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Michael D. Harris  
Division Director  
Enforcement and Compliance Assurance  
Division

## **Appendix A**

When providing the information requested in Appendix B, use the following instructions and definitions.

### **Instructions**

1. Provide a separate narrative response to each question and subpart of a question set forth in Appendix B.
2. Precede each answer with the number of the question to which it corresponds and, at the end of each answer, identify the person(s) who provided information used or considered in responding to that question, as well as each person consulted in the preparation of that response.
3. Indicate on each document produced, or in some other reasonable manner, the number of the question to which it corresponds.
4. When a response is provided in the form of a number, specify the units of measure of the number in a precise manner.
5. Where information or documents necessary for a response are neither in your possession nor available to you, indicate in your response why the information or documents are not available or in your possession, and identify any source that either possesses or is likely to possess the documents or information.
6. If information not known or not available to you as of the date of submission later becomes known or available to you, you must supplement your response. Moreover, should you find at any time after the submission of your response that any portion of the submitted information is false or incorrect, you must notify EPA as soon as possible.

### **Electronic Submissions**

To aid in our electronic recordkeeping efforts, we request that you provide all documents responsive to this information request in an electronic format according to paragraphs 1 through 6, below. These submissions are in lieu of hard copy.

1. Provide all responsive documents in Portable Document Format (PDF) or similar format, unless otherwise requested in specific questions. If the PDFs are scanned images, perform at least Optical Character Recognition (OCR) for “image over text” to allow the document to be searchable. Submitters providing secured PDFs should also provide unsecured versions for EPA use in repurposing text.
2. When specific questions request data in electronic spreadsheet form, provide the data and corresponding information in editable Excel or Lotus format, and not in image format. If Excel or Lotus formats are not available, then the format should allow for data to be used in calculations by a standard spreadsheet program such as Excel or Lotus.

3. Provide submission to the secure web-link provided by EPA.
4. Provide a table of contents of all electronic documents submitted in response to our request so that each document can be accurately identified in relation to your response to a specific question. We recommend the use of electronic file folders organized by question number.
5. Please submit documents claimed as confidential business information (CBI) in separate file folders apart from the non-confidential information. This will facilitate appropriate records management and appropriate handling and protection of the CBI.
6. Certify that the attached files have been scanned for viruses and indicate what program was used.

### **Definitions**

All terms used in this information request have their ordinary meaning unless such terms are defined in the CAA, 42 U.S.C. §§ 7401 *et seq.*, or 40 C.F.R. Part 52 (which incorporates the Federally-approved Stated Implementation Plan), or other CAA implementing regulations.

1. The terms “document” and “documents” means any object that records, stores, or presents information, and includes: email; writings; memoranda; contracts; agreements; records; or information of any kind, formal or informal, whether handwritten or typed, whether in computer format, memory, or storage device, or in hardcopy. All documents in hard copy shall also include attachments to or enclosures with any document.
2. The terms “Prairie State” or “you” or “your” includes, Prairie State Generating Company, LLC and any assumed or related business names, affiliates, agents, representatives, employees, contractors, parent organizations, predecessor corporations, successor corporations, subsidiary organizations, affiliates, and assignee organizations or other entities that performed work or acted in any way on behalf of, are related to, or acted at the direction of Prairie State Generating Company LLC.
3. The term “capital appropriation request” shall mean the document used by plant personnel in seeking management approval for planned capital expenditures at the facility. These documents are also known as authorizations for expenditure, capital requests or other, similar names.
4. The terms "relate to" (or any form thereof) shall mean constituting, reflecting, representing, supporting, contradicting, referring to, stating, describing, recording, noting, embodying, containing, mentioning, studying, analyzing, discussing, evaluating or relevant to.

## **Appendix B**

### **Information You Are Required to Submit to EPA**

Prairie State must submit the following information pursuant to Section 114(a) of the CAA, 42 U.S.C. § 7414(a):

1. Condition 2.1.16(a)(i) of Prairie State's construction permit (No 189808AAB) states that "[t]he Permittee shall evaluate SO<sub>2</sub> emissions from the boilers to determine whether a lower hourly limit may be reliably achieved by the SO<sub>2</sub> control system on a daily basis without unacceptable consequences . . . ." Condition 2.1.16(b) requires that "[t]he Permittee shall perform this evaluation of SO<sub>2</sub> emissions in accordance with a plan submitted to the Illinois EPA for review and comment." Provide a copy of the "plan" submitted to Illinois EPA to evaluate SO<sub>2</sub> emissions from the boilers in accordance with Condition 2.1.16(a-b).
2. If the SO<sub>2</sub> emissions testing plan was NOT submitted to Illinois EPA within 180 days of initial startup of the boiler, provide a detailed description as to why the plan was not submitted at that time. Provide copies of any Illinois EPA responses granting any extensions.
3. In Prairie State's Fourth Response to EPA's last Information Request, it stated that a "reasonable search did not identify any response from IEPA" (Bates No. PSG20242). Please explain exactly what search(es) were conducted and confirm that Prairie State has no relevant, responsive documents from the Illinois EPA regarding the optimization of SO<sub>2</sub> emission controls.
4. In Prairie State's Fourth Response to EPA's last Information Request, it stated that it provided a "series of monthly reports" to IEPA that "necessitated an extension of the shakedown period for the two units." Provide a complete copy of any and all submittals, responses, approvals, and/or correspondence from, and to, IEPA regarding these reports, the SO<sub>2</sub> emission limit, and any extensions thereof.
5. Provide a single spreadsheet for each unit in Excel compatible, non-password protected, unlocked format of hourly data from January 1, 2018, to the date of this request that includes the following:
  - a. date and time;
  - b. heat input rate (mmbtu/hr);
  - c. average daily generation (MW<sub>g</sub>);
  - d. total hydrated lime injection rate at each location (tons/hr); and
  - e. hydrated lime gravimetric feeder speeds (hertz); and
  - f. wet ESP operating parameters (voltage, current, sparking rate, and water flow rate).
6. Provide a copy of any permit deviations in the past 5 years, as required by permit Condition 2.1.11(d).

7. Provide a copy of any analysis, report, or evaluation that demonstrates or demonstrated that “a lower [PM<sub>10</sub>] limit cannot be reliably met without unacceptable consequences” in accordance with permit Condition 2.1.17.
8. Condition 2.1.17(a)(i) states that “[t]he emission limit for PM<sub>10</sub> in Condition 2.1.2(b)(i)(B) shall be lowered based on the results of emissions testing unless the Permittee demonstrates and the Illinois EPA concurs, based on an evaluation as provided by Condition 2.1.17, that a lower limit cannot be reliably met without unacceptable consequences.” Condition 2.1.17(b)(i) requires that if “the Permittee elects to perform an evaluation for PM<sub>10</sub> emissions, the evaluation shall be performed in accordance with a plan submitted to the Illinois EPA for review and comment.” Provide a copy of all correspondence and documents submitted to or received from IEPA regarding permit Condition 2.1.17.
9. If the PM<sub>10</sub> emissions testing information was NOT submitted to Illinois EPA within 180 days of initial startup of the boiler, provide a detailed description as to why the plan was not submitted at that time. Provide copies of any Illinois EPA responses granting any extensions.
10. Complete the testing and submit the information required in Appendix C.

## Appendix C

### Information You Are Required to Submit to EPA

#### Sulfuric Acid Mist Testing:

Prairie State must conduct testing and submit the following information pursuant to Section 114(a) of the CAA, 42 U.S.C. § 7414(a). Prairie State must submit a test protocol, conduct testing, and submit all other information in accordance with the schedule specified below.

Submit Test Protocol	Within 20 days of receipt of this request
Complete Testing	Within 30 days of receipt of approval of Test Protocol
Submit Testing Report	Within 14 days of completion of testing

1. Prairie State shall submit a protocol for EPA review and approval to perform stack tests for Sulfuric Acid Mist (SAM) and PM (filterable and condensable) on the main stacks of both coal boilers at the Prairie State Generating Station. Prairie State shall conduct the stack tests using EPA Condition Test Method 13 (CTM-13) and EPA Methods 5, 202 and any other test methods necessary to determine SAM and PM/PM<sub>10</sub> emissions.

Prairie State shall calculate the SAM, PM filterable and PM condensable emission rates for each Unit from the stack test results. The results of each stack test shall be reported in both lb/mmBTU and ppm. The protocol shall be submitted electronically to EPA within 20 calendar days of receipt of this request at [chatfield.ethan@epa.gov](mailto:chatfield.ethan@epa.gov). In addition to the proposed test methodology and conditions, the protocol shall also include the proposed operating parameters that Prairie State intends to operate at during the stack tests, including (but not limited to) those listed below. Prairie State shall test at worse-case operating conditions for each pollutant. For each of these operating parameters, Prairie State shall state how such operating rate or configuration is representative of worst-case operating conditions.

#### Operating Parameters:

- a. fuel consumption rate (tons/hr);
- b. generation/output rate (MWg/MWn);
- c. composition of coal (%sulfur, % ash, metals, chlorine, and heat content);
- d. mine where coal will be obtained;
- e. heat input or firing rate (mmBtu/hr) and any other significant operating parameters of the boiler, including temperature of the flue gas entering and exiting the SCR;
- f. hydrated lime injection rate (lbs of lime per hour);
- g. hydrated lime gravimetric feeder speeds (hertz);
- h. location of hydrated lime injection (e.g. injection ports pre-SCR location) and the number and configuration of lances to be used during testing;



- i. specification for the hydrated lime to be utilized;
  - j. operating parameters of the SCR (including but not limited to the urea injection rate, number and type of catalyst layers to be utilized);
  - k. specification for each SCR catalyst layer, including the manufacturer's specified SO<sub>2</sub> to SO<sub>3</sub> conversion rates;
  - l. Mercury control sorbent injection rate;
  - m. ESP primary and secondary voltage, current spark rate readings for each TR set and total power for each ESP box for both the dry and wet ESP;
  - n. water flow rate for the wet ESP
  - o. the time spent blowing soot during the sootblowing test run;
  - p. wet FGD average pH and pressure drop for each absorber module; and
  - q. the proposed filter temperature for the PM stack test.
2. Prairie State shall complete the SAM and PM stack test within 30 days of EPA approval of the testing protocol above.

Each PM stack test shall consist of three separate one-hour runs conducted while the boiler is operating at its maximum steam production rate burning fuels that are representative of the boiler's normal operation. One of these three test runs must be conducted while a normal sootblowing cycle is occurring where normal will be defined by the information submitted and approved in the test protocol. The PM stack tests shall be conducted while all emission controls are operating, including the hydrated lime typically utilized and injected at average rates.

Each SAM stack test shall consist of three separate one-hour runs and be performed under representative operating conditions at high, mid, and low load points to generate a compliance performance curve<sup>1</sup>. Each SAM stack test shall be conducted isokinetically at a location in the stacks, where the gas velocity is average and the sampling rate is the same linear velocity as the gas going up each stack. Prairie State must verify that the stack size/geometry is such that stack flue gases are not stratified at each sampling location prior to the stack test.

From the date of this request, Prairie State shall not perform any repair activities or make any modifications to its SO<sub>3</sub>/H<sub>2</sub>SO<sub>4</sub> mitigation system or ESPs beyond normal maintenance activities representative of past activities until the above stack tests have been completed.

3. Within 14 calendar days of completion of the stack tests above, Prairie State shall generate a final test report which shall identify, describe, and explain, in significant detail: the test programs and procedures utilized; the testing equipment and personnel employed; the test equipment calibrations; and the operational information for the parameters identified in Request 9 above. In addition, Prairie State shall include hourly average emission data from all continuous emission monitors and all continuous opacity monitors.

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<sup>1</sup> Note that this compliance performance curve is intended to guide the facility on the necessary lime injection rate and other operating conditions necessary to maintain continuous compliance with the SAM emission rate.